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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,371	01/02/2001	Yoichi Mochida	P/1071-1220	1674

7590 05/22/2003

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EXAMINER
BELLAMY, TAMIKO D

ART UNIT	PAPER NUMBER
2856	

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/753,371	Applicant(s) MOCHIDA, YOICHI
	Examiner Tamiko D. Bellamy	Art Unit 2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 January 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *10* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1, 2, and 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fima et al. (5,610,334).

With respect to claims 1, 6/1, 7/1, and 12, Fima et al. discloses in Figs. 1 and 2 a vibrating plate 1, a plate 21 that is equivalent to a substrate, and capacitors Cx that allow generation or detection of a motion along the x-axis (col. 3, lines 14-15). Furthermore, Fima et al. discloses vibrations that are urged in the x direction are compressed by suspensions 3 and 4 that are excited in traction-compression mode. Firthermore, Fima et al. discloses vibrations that are urged in the y direction are compressed by suspensions 5 and 6 that are excited in traction-compression mode (col. 2, lines 65-67, col. 2, lines 1-2). The suspensions 3-6 are equivalent to an impact damping mechanism. The combination of suspensions 3 and 5 provide damping vibrations in the x and y direction. Fima et al. lacks the detail of a single unitary member having portions for damping in the X and Y-directions. However, a one-piece construction, in place of separate elements fastened together, is a design consideration clearly within the preview of one having ordinary skill in the art. In re Kohno, 391 F.2d 959, 157 USPQ 275 (CCPA 1968); In re Larson, 340 F.2d 965, 144 USPQ 347 (CCPA 1965). Therefore, it would have been obvious to one

of ordinary skill in the art to provide Fima et al. with a single unitary member, so that the device damping means with a high resistivity to vibrations in two orthogonal directions.

With respect to claims 2, 4 and 5, Fima et al. discloses in Fig. 1 and 2 a vibrating plate 1 that is supported by an orthogonal suspension. As shown in figure 2, the suspension 5 is parallel to substrate 21 as claimed. Furthermore, Fima et al. discloses vibrations that are urged in the x direction are compressed by suspensions 3 and 4 that are excited in traction-compression mode; vibrations that are urged in the y direction are compressed by suspensions 5 and 6 that are excited in traction-compression mode (col. 2, lines 65-67, col. 2, lines 1-2). Hence, Fima et al. discloses the suspensions 3-6 connect to the vibrating mass 1 to a fixed frame 8 (col. 2, lines 60-67). The suspensions 3-6 functions as a combination of a damping mechanism and a supporting means for the vibrating plate 1. Fima et al. also discloses capacitors Cx that allow generation or detection of a motion along the x-axis; and capacitors Cy that allow generation or detection of a motion along the y-axis; (col. 3, lines 14-15). The capacitors Cx and Cy are equivalent to an oscillating generating means as claimed. With respect to further limitations of claim 2, Fima et al. discloses filling the whole with air to provide damping (col. 4, line 34). With respect to further limitations of claim 4, Fima et al. discloses the structure provides a low resonance frequency of about 1500 Hz (col. 4, lines 28-30). Finally, Fima et al. discloses resonant frequency of the first direction should be distinct from the resonance frequency of the orthogonal direction; and the two frequencies should be close (col. 1, lines 24-30). Fima et al. does not specifically disclose that the oscillator, the oscillating support beam, and frame having an entire resonant frequency which is set

to be about 1/(square root of 2) of the oscillator. However, Fima et al. discloses that the two frequencies should be close. The word close includes a resonant frequency that is set to be about 1/(square root of 2) as claimed.

With respect to claims 8/1-11, Fima et al. discloses the vibrating mass 1 is cut out of a larger thin plate 8 made of silicon (col. 2, line55-57). Furthermore, Fima et al. discloses the suspensions 3-6 connect to the vibrating mass 1 to a fixed frame 8 (col. 2, lines 60-67). The suspensions 3-6 are a combination of an impact damping mechanism and support means for the vibrating mass 1.

Response to Remarks

3. Applicant's arguments, see pg. 7, filed 04/16/03, with respect to the rejection(s)of claim(s) 1, 6/1, 7/1, 8/1, and 10/1 under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Fima et al. (5, 610, 334).

4. Applicant's arguments, see pg. 7, filed 04/16/03, with respect to the rejection(s)of claim(s) 2, 4, 5, 6/2, 7/2, 7/4, 8/2, 8/4, 10/2, and 10/4-11/4 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Fima et al. (5, 610, 334).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (703) 305-4971. The examiner can normally be reached on Monday through Friday 9:00 AM to 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Tamiko Bellamy
T.B.
May 7, 2003

HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800